

APPLICANT(S): YELLIN, Daniel
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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

Claim 1 (Currently amended): A wave digital filter, comprising:

an adapter having at least first and second inputs and a controlled gate to delay-disable the propagation into or within the adapter of a valid signal value received at the first input into or within the adapter based on the validity of when an invalid signal value is received at the second input ~~an input signal value.~~

Claim 2 (Previously presented): A wave digital filter according to claim 1, wherein the controlled gate of the adapter comprises a latch.

Claim 3 (Previously presented): A wave digital filter according to claim 1, wherein the controlled gate of the adapter comprises a strobe gate.

Claim 4 (Canceled)

Claim 5 (Canceled)

Claim 6 (Canceled)

Claim 7 (Canceled)

Claim 8 (Canceled)

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Claim 9 (Currently amended): A wave digital filter according to claim 7~~1~~, wherein the ~~delay-unit~~controlled gate comprises an ~~uncontrolled~~ delay ~~element~~unit.

Claim 10 (Currently amended): A wave digital filter according to claim 7~~1~~, comprising two or more adapters, wherein the ~~delay-unit~~controlled gate is able to delay the propagation of the valid signal value such that the valid signal value enters one of the two or more adapters substantially simultaneously with another valid signal value received by ~~another adapter~~ one of the two or more adapters.

Claim 11 (Original) A filter according to claim 7, wherein the value whose propagation is delayed for the predetermined time comprises a valid value.

Claim 12 (Canceled)

Claim 13 (Currently amended) A wave digital filter according to claim 1, wherein the adapter comprises two or more ports, at least one port including one of said first and second inputs and an output.

Claim 14 (Canceled)

Claim 15 (Canceled)

Claim 16 (Previously presented): A wave digital filter according to claim 1, wherein the adapter comprises a multiplier.

Claim 17 (Canceled)

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Claim 18 (Previously presented): A wave digital filter according to claim 1,
wherein the two or more adapters comprise two or more different
types of adapters.

Claim 19 (Canceled)

Claim 20 (Canceled)

Claim 21 (Canceled)

Claim 22 (Canceled)

Claim 23 (Currently amended): A method comprising:

~~delaying propagation of an input signal value into a memoryless
adapter of a wave digital filter until the input signal value is
valid; and~~

enabling the memoryless adapter of a wave digital filter to
calculate new signal values based on signal values received at
two or more inputs of the adapter only when the valid signal
values are received at all inputs of the adapter.

Claim 25 (Currently amended). A method according to claim 23, wherein ~~delaying
the input~~enabling comprises ~~delaying enabling for~~ after a predetermined
time.

Claim 26 (Currently amended) A method according to claim 23, ~~wherein delaying
the input comprises~~delaying disabling the adapter from calculating
the new signal values until all the signal values required for performing
the calculation are expected to be valid.

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Claim 27 (Currently amended) A method according to claim 23, wherein ~~delaying~~
~~disabling the input~~ comprises ~~delaying~~ disabling the an input of the
adapter using a latch.

Claim 28 (Canceled)

Claim 29 (Currently amended): A method comprising:

~~delaying~~ disabling propagation of ~~an input signal~~ a first valid signal
value ~~on~~ received at a first input of an ~~memoryless~~ adapter of a wave
digital filter until a second valid signal value is received ~~on~~ at a second
input of the ~~memoryless~~ adapter; and

enabling the adaptor to calculate ~~the delayed~~ one or more new
signal values based on the first and second valid signal values.

Claim 30 (Currently amended): A method according to claim 29, wherein disabling
~~delaying the value on the first input~~ comprises delaying propagation of
the signal value received at the first input for a predetermined time.

Claims 31 – 40 (Canceled)

Claim 41 (Currently amended): A wave digital filter according to claim 10,
wherein the controlled gate is able to delay the propagation of ~~the~~
signal values from one adapter of the two or more adapters to another
adapter of the two or more adapters until a predetermined number of
changes occur in the signal values ~~occur~~.

Claims 42 – 52 (Canceled)

Claim 53 (Previously presented) A wave digital filter, comprising:

a controlled gate to control the propagation of a value generated
by a first adapter to a second adapter based on the validity of the value.

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Claim 54 (New): An adapter of a wave digital filter, comprising:

two or more inputs operably coupled to two or more functional units; and

two or more enable lines operably coupled to the two or more functional units, respectively, wherein the two or more enable lines provide control signals to enable the operation of the two or more functional units, respectively, when valid signal values are received on the two or more inputs.

Claim 55 (New): The adapter of claim 54, wherein the two or more inputs are operably coupled to the two or more functional units.

Claim 56 (New): The adapter of claim 54, wherein the number of functional units is substantially equal to the number of the adapter inputs.

Claim 57 (New): A wave digital filter, comprising:

a first adapter having at least three inputs and at least three outputs;

a second adapter having at least three inputs and at least three outputs;

a first latch operably coupled to a first input of the first adapter;

a first register operably coupled to a first output of the first adapter;

a second latch operably coupled to the first register and to a second input of the first adapter; and

a third latch operably coupled to a second output of the first adapter and to one of the inputs of the second adapter.

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Claim 58 (New): The wave digital filter of claim 57, wherein one of the outputs of the second adapter is operably coupled to a third input of the first adapter.

Claim 59 (New): The wave digital filter of claim 57, further comprising a control unit to provide controls signals to the first latch, the second latch and the third latch.

Claim 60 (New): The wave digital filter of claim 57, wherein the first latch, the second latch and the third latch are able to hold signal values and wherein the control unit is able to open the first latch, the second latch and the third latch based on the signal values they hold.